

Theme 4: Technology Transfer and Outreach

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Summary and The Way Forward

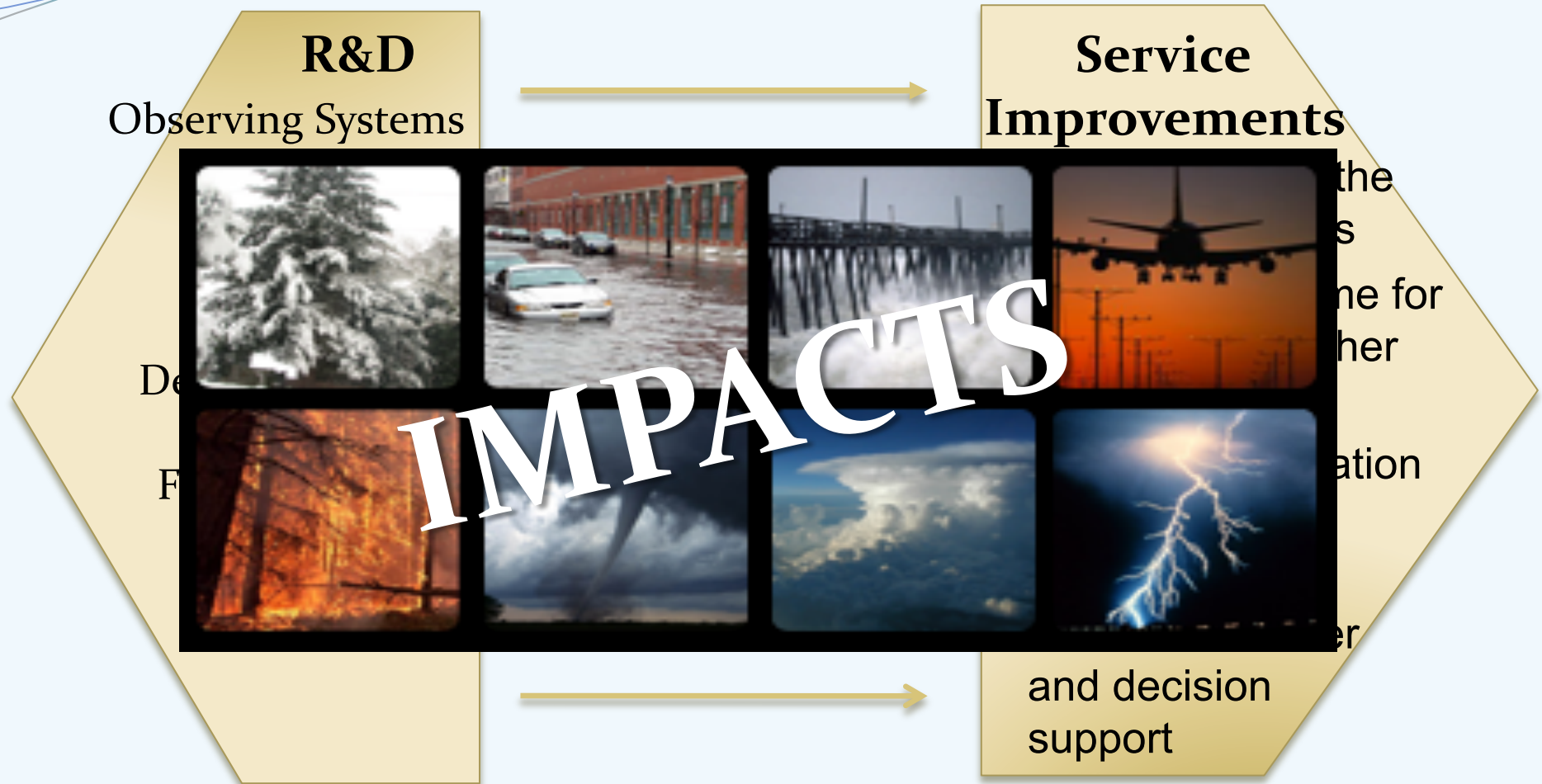


NOAA Goals for Weather and Water Services

To monitor, enhance and deliver environmental information, science and services to save lives, protect property and support environmental stewardship.



Review





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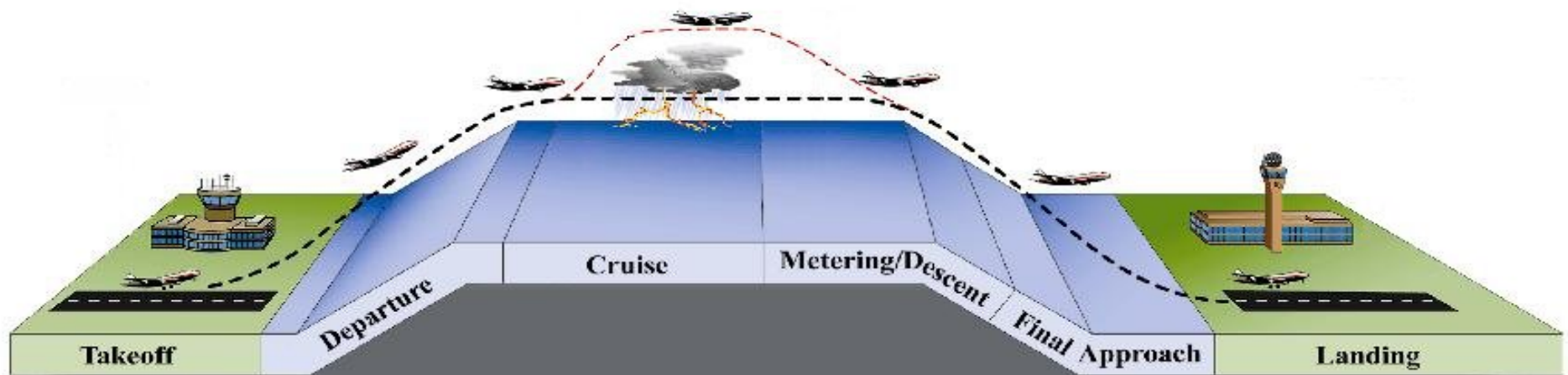




Improving and Integrating Weather Information into Operational Decisions

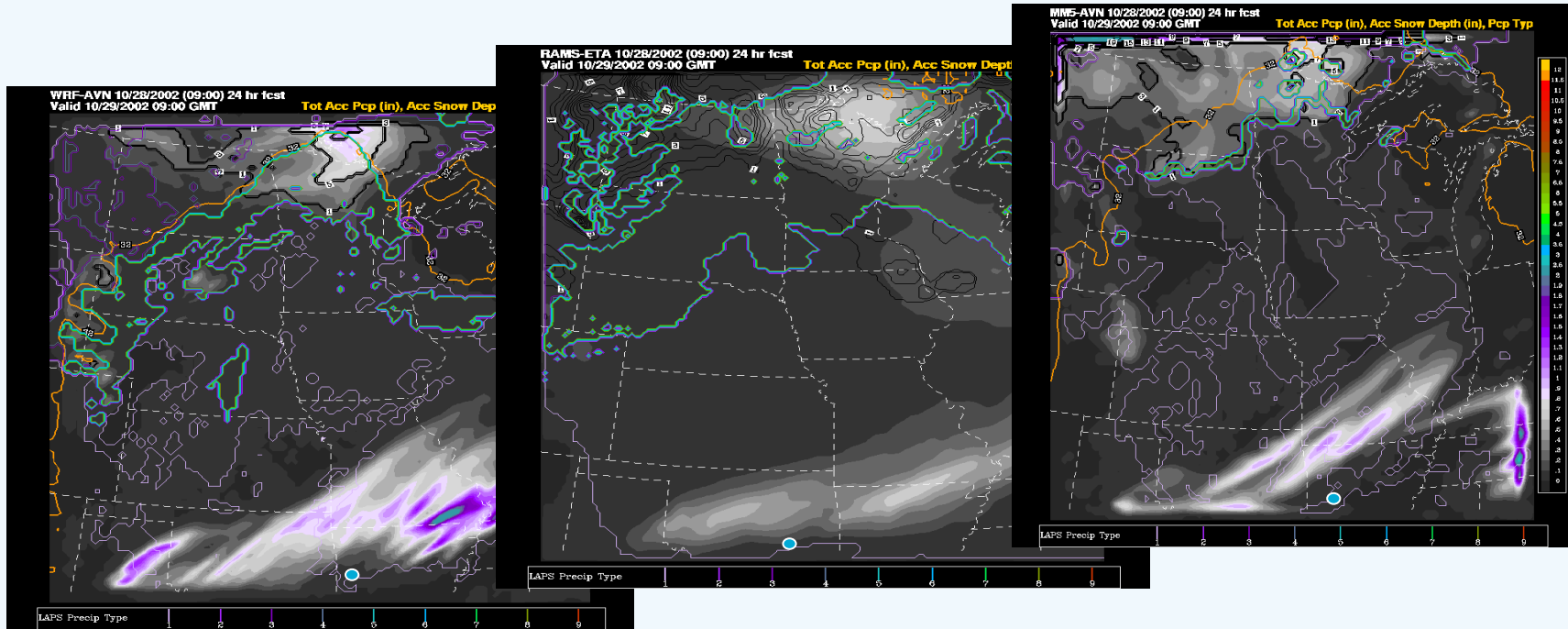
NOAA Next Generation Air Transportation System (NextGen) Program

- Forecast quality measures in context of user decisions
- Information systems with targeted forecaster input
- Improved science and modeling technology
- Sophisticated net-enabled information technology services





Deploying New Models and Prediction Techniques



Yes or no

Probability Generator
Economic Cost/Loss Models

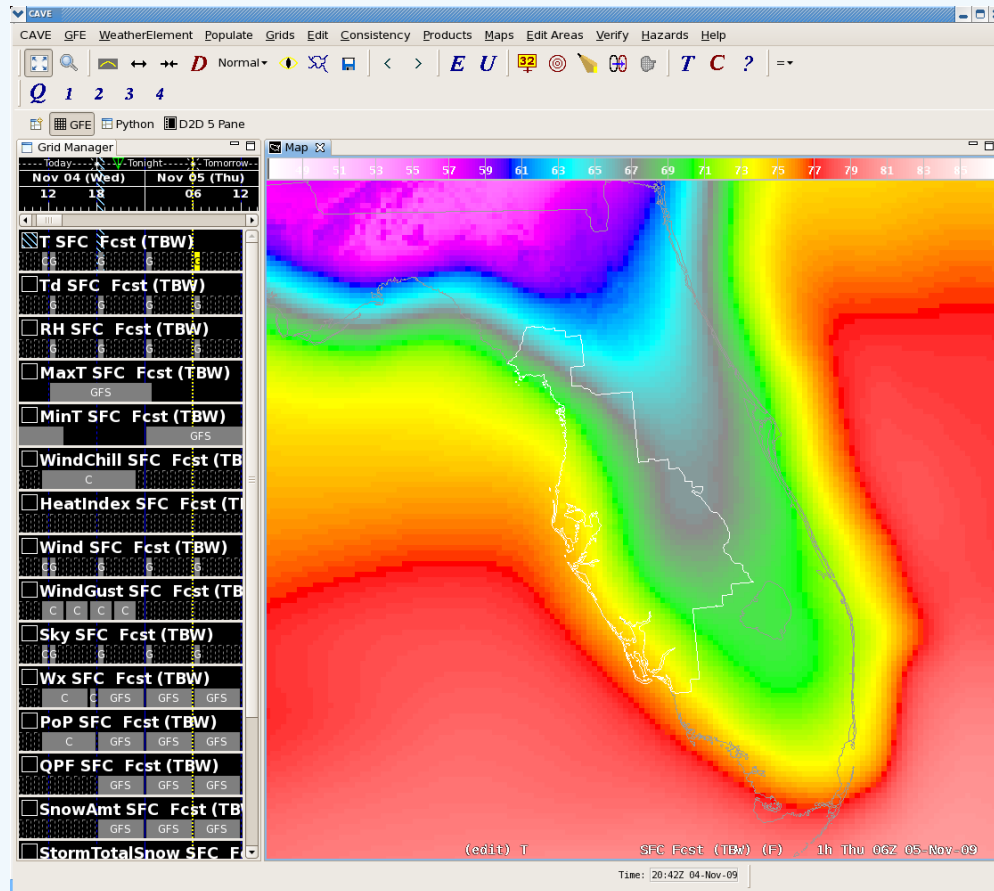
Forecast for Springfield, MO:
79% chance of 1 mm
36% chance of 10 mm
100% chance $T > 32^{\circ}\text{F}$

*Poster





Improving the Forecast Process



- Improved information and display systems
 - AWIPS Evolution (II)
 - Next Generation Graphical Forecast Editor (GFE)
 - Thin clients for AWIPS II
- Weather information with targeted forecaster insight and adjustment

*Poster



Supporting Emergency Response Decisions

Geo-Targeted Alerting System (GTAS)



Prototype of the latest developments in
plume modeling, high resolution
weather models, and network enabled
operations



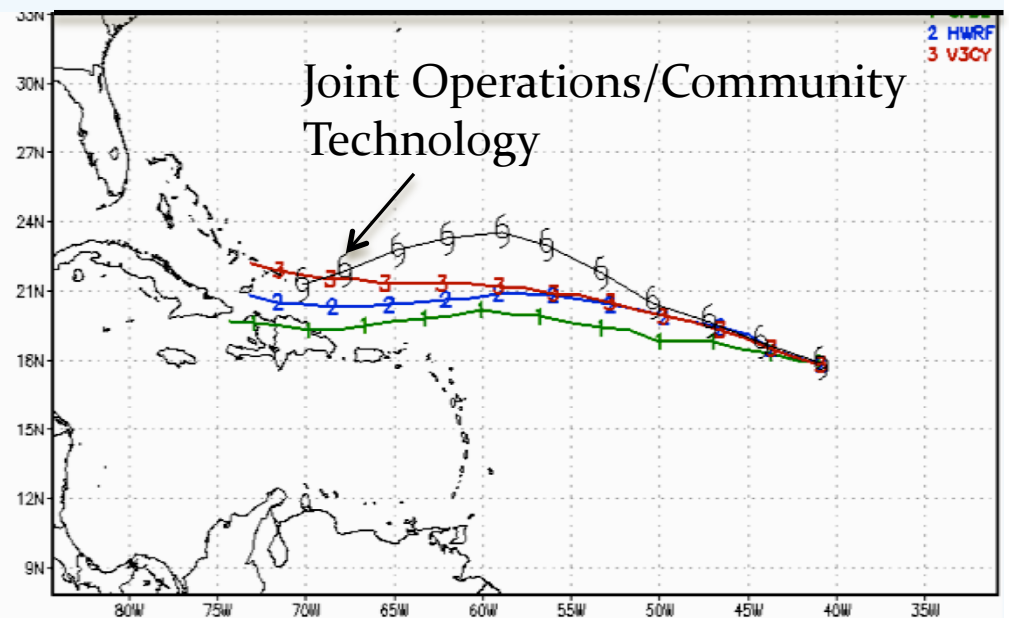
*Poster



Improving Hurricane Forecasts

- Creating a framework for scientific collaboration
- Joining community research with forecast operations
- Facilitating the transfer of research to operations

Hurricane IKE
2008





Embarking on a New Era of Renewable Energy Technologies

Wind Energy

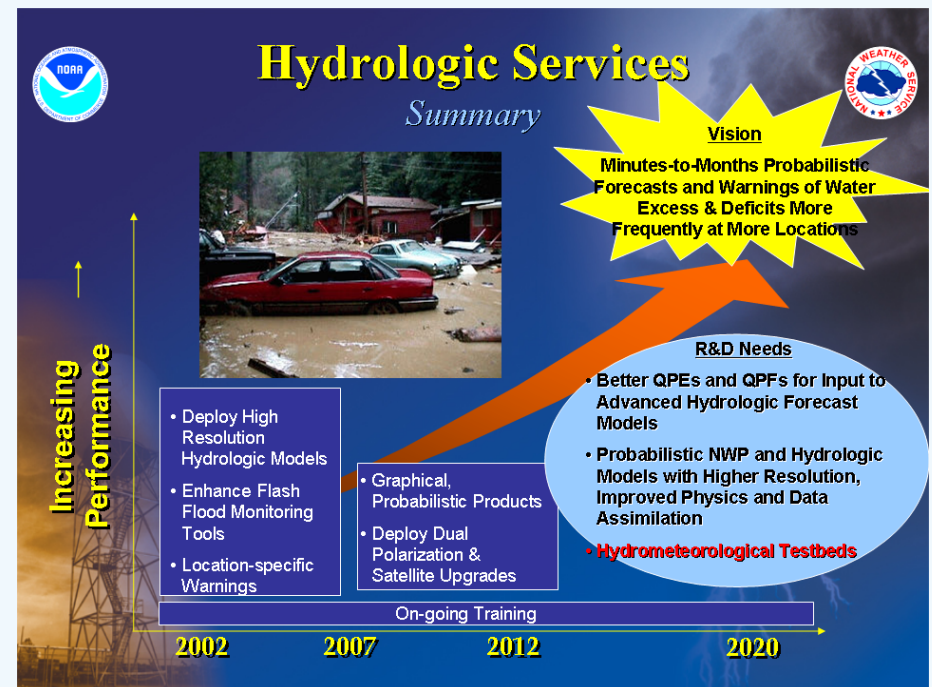
- Renewable energy advancements
- Enhanced observing networks
- Improved high-resolution numerical model wind, cloud, and solar forecasts





Facilitating the Transition of Future Technologies

- Integrate research concepts with user and operational needs
 - Hydrometeorological Testbed
 - Hazardous Wx Testbed
 - Developmental Testbed Center *Poster
 - Operational Proving Ground
 - Aviation Weather Testbed(s)
- Improving the Technology Transition Process





Accelerating Environmental Literacy

- Building Partnerships
 - NOAA Interdisciplinary Scientific Environmental Technology Education Program (ISET) *Poster
- Extending community outreach and education *Poster
 - In house
 - On the road
- Transitioning technology to educational platforms
- Using the latest gaming technology (Virtual Worlds) to provide interactive learning tools



Impacting NOAA

- Better use of weather information resulting in more efficient operational decisions
- Improved delivery of weather information to users
- Increased lead-time for weather warnings
- Increased forecast accuracy
- Improved predictability of onset, duration, and impact of hazardous and severe weather events
- Reduced weather forecast uncertainty





Awards

AWIPS

- 1999 DOC Gold Medal
- 2004 DOC Bronze Medal

FX-Net

- 2005 NIFC Honor Award
- 2007 Certificate of Recognition by the Director of the NWS

FXC

- 2006 Bronze Medal [VACT]
National Weather Association (NWA)
Aviation Forecasting Award [TMU]

GFE

- 2003 DOC Bronze Medal
- 2009 NOAA Technology Transfer Award

ADDs

- 2000 Government Technology Leadership Award

Wind Profiler

- 1993 the DOC Gold Medal
- 1993 NOAA Technology Transfer Award
- 1992 Federal Laboratory Consortium Award for Technology Transfer
- 1998 National Partnership “Hammer” Award for Reinventing Government

GPS-Met

- 2006 DOC Gold Medal
- 1998 National Partnership “Hammer” Award for Reinventing Government

TAMDAR

- 2005 NASA Aviation Safety and Security Program Award
- 2005 NOAA Research Employee of the Year

RUC

- 1998 DOC Bronze Medal
- 2005 OAR Research Paper of the Year
- 2007 OAR Research Paper of the Year

RSA

- 2005 NOAA Technology Transfer Award

PADS

- 2008 NOAA Technology Transfer Award

Virtual Worlds

- 2009 listed in Government Computer Week “Fed 100”

Science on a Sphere

- 2005 Patent
- One of Time Magazine’s Best Inventions of 2006





Customers and Collaborators





Questions